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CATALOGUE

OF THE

STATE COLLEGE OF AGRICULTURE

AND THE

MECHANIC ARTS.

1881–82.

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OF THE

STATE COLLEGE OF AGRICULTURE

AND THE

MECHANIC ARTS,

ORONO, ME., 1881-82.

AUGUSTA:
SPRAGUE & SON, PRINTERS TO THE STATE.
1882.

TRUSTEES.

Hon. WILLIAM P. WINGATE, Bangor, *President.*
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TREASURER:

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EXECUTIVE COMMITTEE:

Hon. WILLIAM P. WINGATE.
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EXAMINING COMMITTEE:

His Excellency HARRIS M. PLAISTED.
Rev. CHARLES F. ALLEN, D. D.
Rev. SAMUEL F. DIKE, D. D.

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MERRITT C. FERNALD, A. M., PH. D., PRESIDENT,
and Professor of Physics and Mental and Moral Science.

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WALTER BALENTINE, M. S.,
Professor of Agriculture.

CHARLES H. BENJAMIN, M. E.,
Professor of Mechanical Engineering.

WALTER FLINT,
Instructor in Vise-work and Forge-work.

TIMOTHY G. RICH,
**Farm Superintendent.*

HENRY M. LANDER,
Steward.

* Gilbert M. Gowell, Farm Superintendent after April 1, 1882.

STUDENTS.

SENIOR CLASS.

Bickford, Charles Swan,	Belfast.
Boynton, Jacob Leighton,	Ashland.
Brown, Charles Weston,	Hampden.
Buzzell, Stephen Jennings,	Argyle.
Dunton, Oscar Howard,	Hampden.
Flint, Walter,	West Baldwin.
Fuller, George Ripley,	Tremont.
Garland, Charles Clinton,	W. Great Works.
Gould, Joseph French,	Stillwater.
Hine, Thomas Walton,	Richmond.
Howard, Will Russell,	Belfast.
Hurd, Alonzo L.,	Brownfield.
Keith, Alfred Justin,	Oldtown.
Kelleher, Bartholomew Patrick,	Orono.
Kimball, Frank Issacher,	Alfred.
Page, Parker James,	Orono.
Patten, James Herbert,	Newport.
Reed, Frederick Marten,	Bangor.
Snow, Gleason Cyprian,	North Orrington.
Starrett, Avery Palmer,	Warren.
Todd, Frank Herbert,	Georgetown.
Webster, Eben Crowell,	Orono.
Wight, Willard Alberto,	Windsor.
Woodward, Daniel Carr,	Winthrop.

JUNIOR CLASS.

Cain, James Henry, -	Orono.
Cilley, Jonathan Vernet,	Rockland.
Currier, George Russell,	Wilton.
Emery, Frank Edwin,	Canaan.
Fernald, Arthur Liddell,	South Levant.
Longfellow, Henry Whitney,	Machias.
Merrill, Lucius Herbert,	Auburn.
Michaels, Jennie Chase,	Stillwater.
Mullen, Charles Ward,	Greenbush.
Patten, Truman Miller,	Hermon.
Powers, Harry Wilson,	Orono.
Putnam, Charles Edgar,	Jackson.
Robinson, Lewis, Jr.,	Hampden.
Sutton, George Arthur,	Orono.
Starbird, Ralph,	Fairfield.
Taylor, Levi William,	Jay.
Webster, Frank Carr,	Bangor.

SOPHOMORE CLASS.

Allan, George Herman,	Dennysville.
Bailey, Edward Mansfield,	Orono.
Berry, William Alanson,	Hampden.
Burleigh, Will Hall,	Fairfield.
Conroy, Mary Frances,	Brewer.
Dunning, James Alexander,	Bangor.
Ellis, Freeland,	Guilford.
Fernald, Hattie Converse,	Orono.
Hatch, Elmer,	Lagrange.
Hill, John Edward,	Bangor.
Kelley, Joseph Grant,	Orono.
Ladd, Edwin Fremont,	Starks.
Leighton, Robert Smith,	Steuben.
Longfellow, Gilbert, Jr.,	Machias.
Lunt, Clarence Sumner,	Stillwater.
Morey, William, Jr.,	Hampden.
Pattangall, William Robinson,	Pembroke.
Patterson, Robert Crosby,	Dexter.
Ridley, Warren Joseph,	Cornville,
Savage, Elmer Americus,	Livermore Centre
Stevens, Fred Leroy,	Temple.
Trueworthy, Horace Griffin,	Orono.
Webber, William,	Guilford.
Whipple, Jotham, Jr.,	Solon.

FRESHMAN CLASS.

Chamberlain, George Walker,	W. Lebanon.
Clark, Irving Mason,	Bethel.
Cutter, Leslie Willard,	Bangor.
Davis, Harry Wilbur,	Guilford.
Dole, Ashar,	Brewer.
Dutton, Orion Jessee,	Vassalborough.
Fernald, Henry Leroy,	Orono.
Folsom, Eugene Leslie,	Stillwater.
Hanscom, George Loring,	Orono.
Hill, Samuel W.,	Machias.
Hull, Frank Eugene,	Warren.
Joy, J. Fremont,	West Waterville.
Keyes, Austin U.,	Orland.
Libby, Willard A.,	South Auburn.
Merrill, Dennis D.,	Orono.
Merritt, Elmer Ellsworth,	Houlton.
Moulton, Joseph Perkins,	Sanford.
Pennell, Elmer Ellsworth,	Saccarappa.
Philbrook, William,	Bethel,
Prince, Carl Hersey,	Turner.
Riggs, Louis Warner,	No. Georgetown.
Smith, Charles F.,	Searsport.
Williams, Charles S.,	Monhegan Island.

SPECIAL COURSE.

Abbott, Edward Sewall,	Dexter.
Dickerson, Fred William,	Belfast.
Rich, Everett Frost,	Orono.

SUMMARY.

Seniors,	24	Freshmen,	23
Juniors,	17	Special,	3
Sophomores,	24		
		Total,	91

OFFICERS OF THE COBURN CADETS.

MAJOR—A. E. Rogers.
ADJUTANT—W. R. Howard.

COMPANY A.	COMPANY B.
Captain, F. I. Kimball.	Captain, H. A. Keith.
Senior 1st Lieut., W. Flint.	Senior 1st Lieut., J. L. Boynton.
Junior 1st Lieut., D. C. Woodward.	Junior 1st Lieut., W. R. Howard.
2d Lieut., A. P. Starrett.	2d Lieut., F. M. Reed.
1st Sergeant, C. W. Brown.	1st Sergeant, A. L. Hurd.
2d Sergeant, J. F. Gould.	2d Sergeant, L. C. Tilley.
3d Sergeant, L. W. Taylor,	3d Sergeant, R. Starbird.
4th Sergeant, G. R. Currier.	4th Sergeant, H. W. Longfellow.
1st Corporal, W. E. Emery.	1st Corporal, L. H. Merrill.
2d Corporal, L. Robinson, Jr.	2d Corporal, A. L. Fernald.
3d Corporal, G. A. Rich.	3d Corporal, G. A. Sutton.
4th Corporal, J. H. Cain.	4th Corporal, F. G. Webster.

PRIZES FOR 1881.

Coburn Prize for best Sophomore Declamation, awarded to L. W. Taylor.

Coburn Prize for best Junior Essay, awarded to A. L. Hurd.

DESIGN OF THE INSTITUTION.

It is the design of the Maine State College of Agriculture and the Mechanic Arts to give the young men of the State, who may desire it, at a moderate cost, the advantages of a thorough, liberal and practical education. It proposes to do this by means of the most approved methods of instruction, by giving to every young man who pursues the course of study an opportunity practically to apply the lessons he learns in the class-room, and by furnishing him facilities for defraying a part of his expenses by his own labor.

By the act of Congress granting public lands for the endowment and maintenance of such colleges, it is provided that the leading object of such an institution shall be, "without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to Agriculture and the Mechanic Arts."

While the courses of study fully meet this requisition, and are especially adapted to prepare the student for agricultural and mechanical pursuits, it is designed that they shall be also sufficiently comprehensive, and of such a character, as to secure to the student the discipline of mind and practical experience necessary for entering upon other callings or professions.

CONDITIONS OF ADMISSION.

Candidates for admission to the Freshman class must be not less than fifteen years of age, and must pass a satisfactory examination in Arithmetic, Geography, English Grammar, (especial attention should be given to Orthography, Punctuation and Capitals), History of the United States, Algebra as far as Quadratic Equations, and five books in Geometry.

Although the knowledge of Latin is not required as a condition of admission, yet the study of that language is earnestly recommended to all who intend to enter this Institution.

Candidates for advanced standing must sustain a satisfactory examination in the preparatory branches, and in all the studies previously pursued by the class they propose to enter.

Satisfactory testimonials of good moral character and industrious habits will be rigidly exacted. They should be presented on the day of examination.

The day after Commencement, which is the last Wednesday of June, and the day of the beginning of the first term, are the appointed times for the examination of candidates.

COURSES OF INSTRUCTION.

Five full courses are provided, viz: A Course in Agriculture, in Civil Engineering, in Mechanical Engineering, in Chemistry, and in Science and Literature.

The studies of the several courses are essentially common for the first two years, and are valuable not only in themselves, but also as furnishing a necessary basis for the more technical studies and the practical instruction of the Junior and Senior years.

Physical Geography, taught in the first term of the Freshman year, serves as a suitable introduction to Geology which is taken up later in each of the courses. Physiology serves as an introduction to Comparative Anatomy, and Algebra, Geometry and Trigonometry are needful preliminaries to the higher mathematics and the practical applications required in Surveying, Engineering proper, and Astronomy. Botany, Chemistry and Physics are highly important branches, common to all the assigned courses, and hence taken by all the students who are candidates for degrees.

Rhetoric, French and English Literature form the early part of a line of studies which later includes German, Logic, History of Civilization, U. S. Constitution, Political Economy and Mental and Moral Science, branches, several of which relate not more to literary culture than to social and civil relations, and to the proper preparation for the rights and duties of citizenship.

Composition and Declamation are regular exercises in all the courses throughout the four years. For the characteristic features of each course reference is made to the explanatory statements following the several schemes of study.

SPECIAL COURSES.

Students may be received for less time than that required for a full course, and they may select from the studies of any class such branches as they are qualified to pursue sucessfully. Students in Special Courses are not entitled to degrees, but may receive certificates of proficiency.

DEGREES.

The full course in Civil Engineering entitles to the Degree of Bachelor of Civil Engineering; the full course in Mechanical Engineering, to the Degree of Bachelor of Mechanical Engineering; the full course in Agriculture, Chemistry, or Science and Literature, to the Degree of Bachelor of Science.

Three years after graduation, on presentation of a satisfactory thesis with the necessary drawing, and proof of professional work or study, the Bachelors of Civil Engineering may receive the Degree of Civil Engineer; the Bachelors of Mechanical Engineering, the Degree of Mechanical Engineer; the Bachelors of Science, the Degree of Master of Science.

COURSE IN AGRICULTURE.

FIRST YEAR.

First Term.	*Second Term.*
Physical Geography.	Rhetoric and Botany.
Physiology.	Algebra and Geometry.
Algebra.	French.
P. M. Labor on Farm.	P. M. Book-Keeping and Labor on Farm.

SECOND YEAR.

First Term.	*Second Term.*
Botany, Horticulture and Arboriculture.	English Literature and Surveying or (L) History of England.
General Chemistry.	Physics.
French.	Qualitative Chemistry.
Trigonometry.	P. M. Mechanical Drawing.
P. M. Free-hand Drawing.	Field Work and Forge Work.*

THIRD YEAR.

First Term.	*Second Term.*
Farm Drainage, Mechanical Cultivation of the Soil, and Physics.	Organic Chemistry and Principles of Plant Feeding.
Agricultural Chemistry.	Zoology and Entomology.
Mechanics, Agricultural Engineering and Farm Implements.	German.
† American Literature.	P. M. Laboratory Work and Experimental Farming or † Analysis of English Authors.
German.	
P. M. Laboratory Work or †Analysis of American Authors.	

FOURTH YEAR.

First Term.	*Second Term.*
Landscape Gardening, Stock Breeding and Veterinary Science.	Cultivation of Cereals, care and Feeding of Animals, Dairy Farming and Sheep Husbandry.
Comparative Anatomy.	Mineralogy and Geology.
History of Civilization.	U. S. Constitution and Political Economy.
Logic.	Mental and Moral Science.
P. M. Experimental Farming and Agricultural Botany or *Historical Readings and Analysis.	

* Elective with a part of the Mechanical Drawing.

† To be taken in Course in Science and Literature in place of study preceding.

EXPLANATORY STATEMENTS.

This course is designed to fit young men to follow agriculture as a profession, with success, as well as to prepare them for the intelligent performance of the duties of citizenship.

To this end, the curriculum of studies is largely scientific and technical, not omitting, however, those branches that have been referred to as pertaining to social and civil relations.

The instruction in agriculture is given largely by lectures, and embraces subjects of great practical importance to the farmer, which are briefly explained under the following heads:

Mechanics and Farm Implements.—Combined with recitations in mechanics from a text-book, lectures are given on the principles of construction and use of farm implements, illustrated by charts to the extent possible.

Agricultural Engineering.—The construction of roads, culverts and masonry and the strength of materials, are the principal topics treated under this head.

Mechanical Cultivation of the Soil.—This includes soil physics, or the relations of the soil to heat and moisture, the mechanical conditions of the soil best adapted to plant growth, and the objects to be gained by cultivation.

Principles of Plant Feeding.—Under this head are considered the various methods of retaining and increasing the fertility of the soil, the sources, composition and methods of valuation of commercial and farm manures, together with the principles governing their treatment and application.

Landscape Gardening.—The object of this study is to furnish correct notion of the manner of laying out and beautifying grounds.

Cultivation of Cereals.—Lectures are given upon the best methods of cultivating the principal farm crops.

Care and Feeding of Animals.—This subject includes the composition of cattle foods, their changes and uses in the animal system, and the value and economic use of the various kinds.

Dairy Farming.—This embraces the chemical and physical properties of milk, and the principles and practical operations that underlie its production and manufacture into butter and cheese.

Sheep Husbandry.—The characteristics and comparative merits of our different breeds of sheep are discussed, also their adaptability to different conditions and uses.

Botany, Horticulture and Arboriculture.—Following recitations and practical work in Botany, lectures are given upon fungi injurious to the farmer, and upon the principles of fruit and forest culture.

Chemistry.—One term is devoted to General Chemistry, one term to Agricultural Chemistry, one-half term to Organic Chemistry, and the afternoons of several terms are devoted to laboratory practice, including analyses of farm products.

Zoölogy and Entomology.—In Zoölogy, the larger groups of the animal kingdom are taken up and described in lectures which are illustrated by means of diagrams, models, or the objects themselves, and the students are required to make critical studies of typical animals of each group. Such laboratory practice is regarded an indispensable training for the more advanced study of the higher animals, and also forms the basis of the study of Historical Geology.

The studies in Entomology are conducted in a similar manner. After a general review of the orders has been given, illustrated by such common insects as are familiar to all, the beneficial and injurious are taken up more in detail, their round of life described, together with the injuries they do to the products of the farmer, the gardener, and the fruit-raiser, as well as to our forests and building materials, and the best known means of keeping them in check. For the purpose of making the instruction as practical and impressive as may be, many of the injurious insects are carried through their transformations in the class-room, where each student can note the various changes from day to day, and learn to recognize these insect enemies in any stage of their existence; and each member of the class is required to devote some time in field-collecting, and in observing the habits and work of insects in nature.

The subject of Bee-Keeping is taken up quite at length; the different kinds of bees in a swarm, their habits, anatomy, and the mode of collecting the different products are all described and illustrated by means of elaborate models, while artificial swarming, the mode of hybridizing a swarm, and the advantages of the same, with the most approved methods now in use for the care and management of bees, are also fully described.

Comparative Anatomy.—Under Comparative Anatomy are taken up the anatomy and physiology of our domestic animals, together with a brief outline of our wild animals, so far as time permits.

This is followed by a course of illustrated lectures on Stock Breeding and Veterinary Science.

Mineralogy and Geology.—A preliminary course of lectures is given on Mineralogy, followed by laboratory practice in the determination of minerals, and in lithology, special attention being called to gypsum, limestone, and such other minerals as are of direct importance to the students of agriculture.

The instruction in Geology is by means of illustrated lectures and excursions, critical attention being given to the origin and formation of soils.

Law.—A course of lectures is given to the Senior class on International and Rural Law.

Throughout the course, the endeavor is made to inculcate established principles in agricultural science, and to illustrate and enforce them to the full extent admitted by the appliances of the laboratory and the farm. So far as possible, students are associated with whatever experimental work is carried on, that they may be better fitted to continue such work in after life.

Those who complete this course receive instruction also in Mathematics, French, German, English Literature, Logic, United States Constitution, Political Economy, and Mental and Moral Philosophy, and on presenting satisfactory theses upon some agricultural topic, are entitled to the degree of Bachelor of Science.

The Course in Science and Literature includes French and German, the general, mathematical, and most of the scientific studies of the agricultural course. Instead of certain branches quite purely technical in the latter course, History, and English and American Literature are substituted.

In the special laws of the State, passed in 1872, it is provided that young ladies "who possess suitable qualifications for admission to the several classes may be admitted as students in the college."

In arranging the course in Science and Literature reference has been had to this enactment. From this course, however, young men who desire it are not excluded, as, on the other hand, young ladies are not excluded from any of the other courses.

COURSE IN CIVIL ENGINEERING.

FIRST YEAR.

First Term.	*Second Term.*
Algebra.	Algebra and Geometry.
Physical Geography.	Rhetoric and Botany.
Physiology.	French.
P. M. Labor on Farm.	P. M. Book-Keeping and Labor on Farm.

SECOND YEAR.

First Term.	*Second Term.*
Trigonometry.	Analytical Geometry and Calculus.
Botany, Horticulture and Arboriculture.	English Literature and Surveying.
General Chemistry.	Physics.
French.	P. M. Mechanical Drawing and Field Work.
P. M. Free-Hand Drawing.	

THIRD YEAR.

First Term.	*Second Term.*
Henck's Field Book.	Mechanics.
Calculus.	Descriptive Geometry.
Physics.	Descriptive Astronomy.
German.	German.
P. M. Field Work and Drawing.	P. M. Isometric and Cabinet Projection and Perspective.

FOURTH YEAR.

First Term.	*Second Term.*
Civil Engineering.	Civil Engineering, Designs and Specifications.
Stereotomy.	Mineralogy and Geology.
Practical Astronomy.	U. S. Constitution and Political Economy.
Logic.	P. M. Machine Drawing and Designing.
P. M. Topography and R. R. Work.	

EXPLANATORY STATEMENTS.

The object of this course is to give the student a thorough knowledge of Higher Mathematics, Mechanics, Astronomy and Drawing, and, at the same time, a thorough drill in the use of instruments and in the application of mathematical principles and rules, so that the graduates can at once be made useful in engineering work and be fitted, after a limited amount of experience in the field, to fill positions of importance and trust. The course is also arranged so as to afford the education required to prepare the graduate for a responsible position among *men*, as well as among engineers. In this course the work is the same as for other courses until the second term of the second year, when Analytical Geometry is substituted for Qualitative Chemical Analysis.

In the first term of the Junior year, Henck's Field Book is used as a text-book, from which the student obtains methods of running railroad curves, putting in switches and turnouts, setting slope-stakes, and the calculation of earthwork. This is supplemented with examples worked by the student, and lectures on preliminary and final surveys and on the resistance to trains offered by grades and curves. These methods of the text-book, so far as possible, are applied in the field and the drawing room, each student in the course being required to work two and one-half hours, either in the field or drawing room, every day.

The subject of Applied Mechanics is taken up the last term of this year, in which the students receive a thorough training in the principles underlying construction, illustrated as far as possible by practical example, in which these principles are applied. During this term, each student in the class works two and one-half hours each day in the drawing room, where isometric, cabinet and perspective projection are taught by means of lectures and problems drawn by the students.

During the Senior year, Rankine's Civil Engineering is the text-book employed, though other works are used for reference. Besides these, much material is given in the form of lectures and notes on the blackboard.

In the first term of this year the principles of the strength of materials are taken up, supplemented by information as to durability, preservation and fitness for special purposes. The principles

of hydraulics, as applied in engineering, the theories of ties, struts, beams, foundations, retaining walls and arches are fully treated.

Stone cutting is taken up this term, by lectures and practical problems, each student being required to make a complete set of working drawings of the most common forms of masonry arches.

Also the subjects of topographical and railroad surveying are taken up this term and illustrated by a topographical survey of a portion of the college farm, and by the preliminary and final surveys for a railroad extending from the college grounds to some point on the E. & N. A. Railroad, together with the drawings, calculations of earthwork and estimate of building and equipping.

The first part of the last term of this year is devoted to the theory of roof and bridge trusses, lectures on the locomotive engine and its application to various kinds of traffic, while the greater part is given to the application of the principles already learned to the designing and calculation of various kinds of engineering structures, and to making out estimates and specifications.

This, together with the preparation of a satisfactory thesis, completes the work in the course in Civil Engineering.

The subjects of land surveying and elementary mechanical drawing, which are common to all courses, are included in the work of the department, and are taught during the summer term. The first eight weeks being devoted to drawing, while the remaining twelve weeks are devoted to practical surveying; besides an hour's recitation each day, the class is engaged two and one-half hours, either in the field or drawing room, becoming familiar with the use and care of instruments, putting into practice the problems found in their text-book, and making actual surveys.

MINERALOGY AND GEOLOGY.

Mineralogy is taught by an introductory course of lectures, followed by laboratory practice in the determination of minerals and rocks, especial attention being given to their value for building purposes. This is immediately followed by a course of lectures in Geology, together with excursions for the purpose of studying the rocks *in situ*, and also superficial deposits. Critical examinations are made in various railroad cuts, of the hardness, slaty structure, jointed structure, etc., as bearing upon the cost of excavation.

ASTRONOMY.

In the first part of the spring term, Descriptive Astronomy is taken by the students in Civil and Mechanical Engineering, of the Junior class, and Practical Astronomy during the larger part of the term following.

The course in Astronomy is designed to enable students to determine with accuracy geographical positions. The principal instruments employed are chronometer, sextant, transit, and for work of precision, the Repsold vertical circle, an instrument made in Hamburg, Germany, in 1874, for this institution. Practical instruction is given in the use of these instruments, and in the most approved methods of reducing observations for the determination of latitude and longitude.

DEGREES.

Students in this department secure the degree of Bachelor of Civil Engineering on graduating, with the full degree of Civil Engineering three years after, on presentation of a satisfactory thesis with proof of professional work or study.

COURSE IN MECHANICAL ENGINEERING.

FIRST YEAR.

First Term.

Algebra.
Physiology.
Physical Geography.
P. M. Labor on Farm.

Second Term.

Algebra and Geometry.
Rhetoric and Botany.
French.
P. M. Book-Keeping and Labor on Farm.

SECOND YEAR.

First Term.

Trigonometry.
French.
General Chemistry.
Botany, Horticulture and Arboriculture.
P. M. Free-Hand Drawing.

Second Term.

Analytical Geometry and Calculus.
English Literature and Surveying.
Physics.
P. M. Mechanical Drawing.
Field Work and Forge Work.

THIRD YEAR.

First Term.

Machinery and Mill Work.
Calculus.
German.
P. M. Shop Work and Machine Drawing.

Second Term.

Machinery and Mill Work.
Descriptive Geometry.
German.
P. M. Isometric and Cabinet Projection and Perspective.

FOURTH YEAR.

First Term.

Hydraulic Motors.
Practical Astronomy.
Logic.
P. M. Applied Descriptive Geometry and Machine Drawing.

Second Term.

Steam Engine, Designs and Specifications.
Mineralogy and Geology.
U. S. Constitution and Political Economy.
P. M. Machine Drawing and Designing.

EXPLANATORY STATEMENTS.

It is the design of this course to give such a knowledge of Mathematics, Mechanics, Principles of Mechanism, Drawing and Manual Art as shall enable the student successfully to enter practical life as an engineer, with the same thorough education in subjects required to fit him for the general duties of life as is afforded by the other courses.

The first two years' work is identical with that of the students in Civil Engineering, except that forge work is taken the second term of the second year. In the Junior year, Rankine's Machinery and Mill Work and MacCord's Teeth of Spur Wheels are the text-books used. The first term is devoted to the geometry of machinery, showing the students how different motions may be obtained independently of the power required. Special attention is here given to the subject of gearing, and a full set of problems worked out, illustrating cases commonly occurring in practice. In the second term of this year the time is given to dynamics and the laws of the strength of materials.

In the Senior year, Goodeve's Steam Engine and Mark's Proportions of the Steam Engine are the text-books used. During the first term, instruction is given by lectures on the storage of water for power, and on the theory and construction of modern water-wheels. Practical problems on these subjects are worked out by the students. The first part of the spring term is employed in studying the laws of the expansion of steam, and their influence upon the construction of steam engines. During the remainder of the term, the students are engaged in designing engines and other machines, and in making detail drawings of the same, such as would be required to work from in the shop.

SHOP WORK.

There are now two shops equipped according to the Russian system, and work in these is required of all students in this course. In the second term of the Sophomore year, a course in forge-work is given, in which the student becomes familiar with the methods in use in actual construction. A similar course in vise work is given during the first term of the Junior year, in which a corresponding knowledge is obtained. It is the intention to add more shops at the earliest possible moment. It should be understood that it is the object in these shops to teach operations in use in a number of trades rather than the details of any one trade.

DRAWING.

The work in drawing commences with a course in Free Hand and Elementary Mechanical Drawing, extending through the Sophomore year. The first term of the Junior year the student gives the time not required for shop-work to line shading and drawing from dimensions taken by him from actual machines.

The second term of this year is devoted to isometric and cabinet projection and perspective. The time for drawing in the first term of the Senior year is given to making line-shaded drawings of various machines, and to preparing working drawings of details suitable for shop use. The afternoon work of the spring term consists of making calculations for original designs, and the construction of the necessary working drawings.

The remarks under Course in Civil Engineering, with regard to Astronomy, Mineralogy and Geology, apply also to this course, and to them reference is made.

Theses are required of all students as a condition of graduation, and must be on some subject directly connected with Mechanical Engineering.

Students in this course receive the degree of Bachelor of Mechanical Engineering upon graduation, with the full degree of Mechanical Engineer three years afterwards upon presentation of a satisfactory thesis and proof of professional work or study.

COURSE IN CHEMISTRY.

FIRST YEAR.

First Term.

Physical Geography.
Physiology.
Algebra.
P. M. Labor on Farm.

Second Term.

Rhetoric and Botany.
Algebra and Geometry.
French.
P. M. Book-Keeping and Labor on Farm.

SECOND YEAR.

First Term.

General Chemistry.
Botany, Horticulture and Arboriculture.
French.
Trigonometry.
P. M. Free-Hand Drawing.

Second Term.

Qualitative Chemistry.
Physics.
English Literature and Surveying.
P. M. Mechanical Drawing and Field Work.

THIRD YEAR.

First Term.

Chemistry.
Physics.
German.
American Literature.
P. M. Laboratory Work.

Second Term.

Chemistry.
Zoology and Entomology.
German.
P. M. Laboratory Work.

FOURTH YEAR.

First Term.

Chemistry.
Comparative Anatomy.
History of Civilization.
Logic.
P. M. Laboratory Work,

Second Term.

Chemistry.
Mineralogy and Geology.
U. S. Constitution and Political Economy.
P. M. Laboratory Work.

EXPLANATORY STATEMENTS.

This course aims to supply a want felt by students who wish to enter certain industries in which a somewhat extensive knowledge of Chemistry is important. The first two years are mainly like those of the other courses; Qualitative Analysis being, however, obligatory for these students in the second term of the Sophomore year.

During the Junior year, daily recitations are held in Agricultural Chemistry and elementary Organic Chemistry, and the study of advanced Inorganic Chemistry is begun. In the Senior year advanced Inorganic Chemistry is concluded and advanced Organic Chemistry taken up.

The afternoons are devoted to Qualitative Chemical Analysis by the Junior and Senior students of the course. The work consists of the most useful gravimetric and volumetric methods, beginning with the simple estimations, which are followed by more complex analyses of alloys, minerals, fertilizers, farm products, &c. A short course in the assay of gold and silver is also given.

The class-room text-books used by this department are: Roscoe's Lessons in Elementary Chemistry, Johnson's How Crops Grow, How Crops Feed, Watts' Organic Chemistry, and Wurtz's Chimie Moderne. In the laboratory are used: Craft's Qualitative Chemical Analysis, Fresenius' Quantitative Chemical Analysis, Caldwell's Agricultural Chemical Analysis, Wohler's Mineral Analysis, J. A. Wanklyn's Milk Analysis, Flint's Examination of Urine, and Rickett's Notes on Assaying.

Some valuable books of reference are found in the library.

Students taking qualitative analysis must furnish a deposit of at least five dollars when they begin; those taking quantitative analysis are required to deposit at least seven dollars. Students taking the course in chemistry or an extended course in quantitative analysis are expected to provide themselves with a small platinum crucible.

The students, after passing all the required examinations and presenting satisfactory theses upon some chemical subject, graduate with the degree of Bachelor of Science.

Post graduate and special students can make arrangements with the Professor of Chemistry for an advanced or special course of laboratory work and recitations.

TABLE OF HOURS—First Term.

Time.	Seniors.	Juniors.	Sophomores.	Freshmen.
8 A. M.	History of Civilization, I, IV, V. Civil Engineering, II.	Agricultural Engineering, &c., I. American Literature, IV, V. Calculus, II, III.	General Chemistry.	Physiology.
9 A. M.	Landscape Gardening, Stock Breeding and Veterinary Science, I, V. Hydraulic Motors, III. Stereotomy, II. Chemistry, IV.	German, I, II, III, IV, V.	Trigonometry.	
10 A. M.	Logic, I, II, III, IV, V.	Agricultural Chemistry, I, IV, V. Machinery and Mill work, III.	Botany, Horticulture and Arboriculture.	Physical Geography.
11 A. M.	Comparative Anatomy, I, IV, V. Practical Astronomy, II, III. (F of T.)	Mechanical Cultivation of Soil, and Farm Drainage, I, V. Physics, I, II, III, IV, V. (L. of T.) Field Book, II.	French.	Algebra.
P. M.	Experimental Farming and Agricultural Botany, I. Historical Readings and Analysis, V. Applied Desc. Geometry and Machine Drawing, III. Topography and R. R. work, II. Laboratory work, IV. Military Drill.	Laboratory work, I, IV. Analysis of American Authors, V. Field work and Drawing, II. Shop work and Machine Drawing, III. Military Drill.	Free-hand Drawing. Military Drill.	Labor on Farm. Military Drill.

Note.—Roman numerals refer to courses as follows: I, Agriculture; II, Civil Eng.; III, Mech. Eng.; IV, Chemistry; V, Science and Lit.

TABLE OF HOURS—Second Term.

Time.	Seniors.	Juniors.	Sophomores.	Freshmen.
8 A. M.	Mineralogy and Geology, I, II, III, IV, V.	Descriptive Astronomy, II, III, (f. of t.) Machinery and Mill work, III. Organic Chemistry, I, IV, V. (f. of t.) Advanced Chemistry, IV. (l. of t.) Principles of Plant Feeding, I, V. (l. of t.)	English Literature and Surveying, History of England (L)	Rhetoric. (f. of t.)
9 A. M.	Mental and Moral Science, I, V. Civil Engineering, II. Steam Engine, III.	German, I, II, III, IV, V.	Qualitative Analysis, I, IV, V.	Botany. (l. of t)
10 A. M.	Cultivation of Cereals, care and feeding of animals, etc., I, V.	Applied Mechanics, II. Zoology and Entomology, I, IV, V.	Qualitative Analysis, I, IV, V. Analytical Geometry and Calculus, II, III.	French.
11 A. M.	U. S. Constitution and Political Economy, I, II, III, IV, V.	Zoology and Entomology, I, IV, V. Descriptive Geometry, II, III.	Physics.	Algebra and Geometry.
P. M.	Machine Drawing and Designing, II, III. Laboratory work, IV. Chemistry, IV. Military Drill.	Chemistry and Experimental Farming, I. Analysis of English Authors, V. Isometric and Cabinet Projection, and Perspective, II, III. Laboratory work, IV. Military Drill.	Mechanical Drawing and Field work, Forge work, III. Military Drill.	Book-keeping and Labor. Military Drill.

LABOR.

It is a peculiarity of the college, that it makes provision for labor, thus combining practice with theory, manual labor with scientific culture.

The maximum time of required labor is three hours a day for five days in the week.

In the lowest class the students are required to work on the farm, and they receive compensation for their labor according to their industry, faithfulness and efficiency, the educational character of the labor being also taken into account. The maximum price paid is ten cents an hour. The labor is designed to be as much as possible educational, so that every student may become familiar with all the forms of labor upon the farm and in the garden.

The students of the three upper classes carry on their principal labor in the laboratory, the drawing rooms, the work shops, or in the field, and for it they receive no pecuniary consideration, since this labor is of a purely educational character.

MILITARY INSTRUCTION.

Thorough instruction is given in Military Science by a competent officer. It extends through the whole college course; the Freshman, Sophomore and Junior classes receiving instruction in infantry tactics, and the Senior class, in artillery drill.

Arms are furnished by the State. The uniform is navy-blue yacht cloth, sack coat and pants, without brass buttons or trimmings that attract attention, and is required to be worn during the military exercises.

LOCATION.

The college has a pleasant and healthful location, between the villages of Orono and Stillwater, about a mile from each. Stillwater river, a tributary of the Penobscot, flows in front of the buildings, forming the western boundary of the college farm, and adding much to the beauty of the surrounding scenery.

The European and North American Railway, over which trains pass several times each day, has a station at the village of Orono. The college is within nine miles of the city of Bangor, and is consequently easily accessible from all parts of the State.

FARM AND BUILDINGS.

The college farm contains three hundred and seventy acres of land of high natural productiveness, and of great diversity of soil, and is therefore well adapted to the experimental purposes of the institution.

White Hall, the building first erected, affords excellent accommodations for a limited number of students. The lower rooms of this building are appropriated to general and class purposes.

Brick Hall contains forty-eight rooms, and has connected with it a boarding house for students. With these buildings, the institution furnishes desirable accommodations for one hundred and twenty-five students.

The Laboratory contains two apparatus rooms, a lecture room, a cabinet, a library and weighing room, a recitation room, and rooms for analytical and other purposes, and is in all respects admirably adapted to the wants of the chemical and mineralogical departments.

APPARATUS.

The college is furnished with new and valuable apparatus for the departments of Physical Geography, Chemistry, Physics, Surveying, Civil Engineering and Mechanical Engineering, to which additions will be made as the exigences of the several departments require. Models have been obtained from the United States Patent Office, and others have been purchased, that serve for purposes of instruction.

LIBRARY.

The library contains 4971 volumes, the larger proportion of which, have been obtained through the generosity of Ex-Governor Coburn. Valuable additions have also been made to it by other friends of the college, only a small number having been purchased with money appropriated by the State. It is earnestly hoped, that so important an auxiliary, in the education of the student, will not be disregarded by the people of the State, and that liberal contributions will be made to the library, not only of agricultural and scientific works, but also of those profitable to the general reader.

READING ROOM.

The reading room is supplied with a number of valuable newspapers and periodicals. Grateful acknowledgement is herewith made for the following papers, generously sent by the proprietors to the college:

Maine Mining Journal, American Cultivator, Home Farm, Zion's Herald, Somerset Reporter, American Sentinel, Freeholder, Waterville Sentinel, Gospel Banner, Oxford Democrat, Lewiston Journal, Fairfield Journal, Portland Transcript, Kennebec Journal, Piscataquis Observer, Daily Whig and Courier, Weekly Whig and Courier, Maine Farmer, Detroit Free Press, New England Farmer, Official Gazette U. S. Patent Office.

The following papers are furnished by subscription principally by the students:

American Machinist, Boston Journal of Chemistry, Gardeners' Monthly, Harpers' Weekly, Chicago Inter-Ocean, Leslie's Illustrated Newspaper, Railroad Gazette, Architect and Builder, New York Times, New York Tribune, Sunday Herald, Eastern Argus, (furnished by S. W. Gould), Teacher, (furnished by M. C. Fernald).

The following are supplied by the College:

American Journal of Science and Art, Popular Science Monthly, National Live Stock Journal, American Agriculturist, Journal Royal Agricultural Society, (England), Journal Franklin Institute, Eclectic Engineering Magazine, International Review, Scribner's Monthly, Atlantic Monthly, Harpers' Monthly Magazine, North American Review, Education, American Machinist.

CABINET.

Rooms have been fitted up with cases of minerals, and specimens of natural history, and several hundred specimens have been presented to the college. The valuable private cabinets of Prof. C. H. Fernald and Ex-President C. F. Allen are placed in these rooms, and are accessible to the students. All specimens presented will be properly credited and placed on exhibition. Rocks illustrating the different geological formations, and minerals found within the State, are particularly solicited.

PUBLIC WORSHIP.

All students are required to attend daily prayers at the college, and public worship on the Sabbath at some one of the neighboring churches, unless excused by the President.

EXPENSES.

Tuition is thirty dollars a year, divided equally between the two terms. Rooms are free to students who board in the college dining hall.

Bedding and furniture must be supplied by the students, who also furnish their own lights. Tables, chairs, bedsteads, sinks and husk mattresses can be purchased at the college at moderate rates.

The price of board is two dollars and sixty cents per week; washing averages not more than sixty cents per dozen.

The warming by steam of single rooms, (each suitable for two occupants) has averaged for the past four years about ten dollars a room for each term. The expense of heating recitation rooms and rooms for general purposes has been about two dollars a term for each student, and the incidental expenses including pay for the services of janitor, pay for bringing mail, for cleaning and renovating rooms, for general repairs, &c., have been less than three dollars per term for each student.

From the items given, with an allowance of a few dollars a year for necessary text-books, quite an accurate estimate of needful expenses can be made.

The college term-bills are payable, one-half at the commencement and the remainder at or before the close of each term.

MEANS OF DEFRAYING EXPENSES.

The terms are so arranged that the long vacation occurs in the winter, that students may have an opportunity to teach during that time. The summer vacation is in the haying season, when farm labor is most profitable. By availing themselves of the opportunities thus afforded, together with the allowance for labor on the college farm, industrious and economical students can cancel the greater part of their college expenses.

SCHOLARSHIPS.

The Trustees make provision for the establishing of free scholarships by the following action:

Voted, That any individual or society paying to the Treasurer a sum not less than seven hundred and fifty dollars, shall be entitled to one perpetual free scholarship in the college.

One such scholarship has been pledged, and will be available after July 1, 1882.

GRADUATES.

CLASS OF 1872.

Name and Occupation. *Residence.*

Benjamin F. Gould, C. E., Farmer .....San Juan, California
George E. Hammond, C. E., Civil Engineer.....Eliot
Edwin J. Haskell, B. S., Silk Manufacturer.....Saccarappa
Heddle Hilliard, C. E., Division Engineer, I. B. & W. Ry.,
Springfield, Ohio
Eber D. Thomas, B. S., Civil Engineer.....Grand Rapids, Mich
George O. Weston, B. S., Farmer.....Norridgewock

CLASS OF 1873.

Russell W. Eaton, C. E., Cotton Mill Engineer...Providence, R. I
George H. Hamlin, C. E., Professor.....State College, Orono
Fred W. Holt, C. E., Civil Engineer..G. S. R. R., St. George, N. B
John M. Oak, B. S., Merchant .....Bangor
Charles E. Reed, C. E., Business Manager, Free Press,
Detroit, Mich
Frank Lampson Scribner, B. S., Tutor,
Girard College, Philadelphia
Harvey B. Thayer, B. S., Druggist .....Monson

CLASS OF 1874.

William A. Allen, C. E., Civil Engineer, M. C. R. R.....Portland
Walter Balentine, B. S., Professor of Agriculture,
State College, Orono
William H. Gerrish, B. S., M. D., Physician.....Merrimac, Mass
John I. Gurney. B. S., Farmer .....Red Bluffs, Wyoming Ter
David R. Hunter, B. S., Police officer .....Oakland, Cal
Louise H. Ramsdell, B. S., (Mrs. Milton D. Noyes).....Atkinson

CLASS of 1875.

Name and Occupation. *Residence.*

Solomon W. Bates, C. E., Civil Engineer.....Waterville
Wilbur A. Bumps, C. E., M. D., Physician..... ...Dexter
Samuel H. Clapp, C. E., Teacher..... Danvers, Mass
Lewis F. Coburn, C. E., Teacher.....Cresent City, Cal
Charles W. Colesworthy, B. S..... .....Nevada
*Charles F. Durham, C. E., Teacher .....Cresent City, Cal
Alfred M. Goodale. B. S., Superintendent Newton Mills, Newton Upper Falls, Mass
Edson F. Hitchings, C. E., Pattern Maker.....Warren, Mass
Whitman H. Jordan, B. S., Professor Agricultural Chemistry, State College, Penn
Edward D. Mayo, M. E., Draughtsman and Instructor in Drawing, Minneapolis, Minn
Albert E. Mitchell, M. E., Mechanical Engineer....Altoona, Penn
Allen G. Mitchell, C. E., Civil Engineer, Penn. R. R., Cornellsville, Pa
*Fred W. Moore, B. S., Teacher.....California
Luther W. Rogers, B. S., Merchant.....Waterville
Minott W. Sewall, M. E., Mechanical Engineer...Wilmington, Del
George M. Shaw, C. E., Principal of Schools.....Oraville, Cal
Wesley Webb, B. S., Farmer .....Unity
*Edgar A. Work, C. E..... .... U. S. Military Academy

CLASS OF 1876.

Edmund Abbott, B. S., M. D., Physician .....Winterport
Charles P. Allen, B. S., Lawyer.....Presque Isle
Eldridge H. Beckler, C. E., Ass't Div. Engineer N. P. R. R., Helena, Mon
Fred M. Bisbee, C. E., Civil Engineer Mex. C. R. R., El Paso, Texas
Edward M. Blanding, B. S., Editor Maine Mining Journal..Bangor
Charles M. Brainard, B. S., Lumberman.....Skowhegan
George H. Buker, B. S., Apothecary.....Presque Isle
Florence H. Cowan, B. S..... .....Orono
Oliver Crosby, M. E., Draughtsman St. P. M. & M. Ry., St. Paul, Minn
Vetal Cyr, B. S., Principal of Madawaska Training School, Fort Kent
James E. Dike, C. E., U. S. Surveyor.....Fargo, Dakota Ter
*Willis O. Dyke, B. S.....Gorham

*Deceased.

Name and Occupation. *Residence.*

Horace M. Estabrook, B. S., Teacher ..... Pembroke
Arthur M. Farrington, B. S., Veterinary Surgeon ..... Chicago, Ill
George O. Foss, C. E., U. S. Engineer ..... St. Paul Minn
William T. Haines, B. S., Lawyer ..... Waterville
Henry F. Hamilton, B. S., D. D. S., Dentist,
124 Commonwealth Avenue, Boston
Newall P. Haskell, B. S., Farmer ..... New Gloucester
Edward S. How, M. E., Book-keeper ..... Portland
Philip W. Hubbard, B. S., Apothecary ..... Farmington
Samuel M. Jones, M. E., Engineer,
Corliss Engine Works, Providence, R. I
Albert M. Lewis, B. S., Clergyman ..... Houlton
Herbert A. Long, M. E., Farmer ..... Bluehill
Luther R. Lothrop, C. E., Civil Engineer N. P. R. R.,
Fergus Falls, Minn
Nelson H. Martin, B. S., Teacher ..... Pembroke
Charles E. Oak, M. E., Surveyor ..... Caribou
George D. Parks, C. E., Lawyer ..... Brunswick
Hayward Pierce, B. S., West Waldo Granite Works ..... Frankfort
Frank R. Reed, C. E., Carpenter ..... Roxbury
Henry J. Reynolds, B. S., Druggist ..... Machias
Charles W. Rogers, M. E., Machinist ..... Charlestown, Mass
William L. Stevens, M. E., Agent of Flouring Mills,
Minneapolis, Minn
John H. Williams, B. S ..... Milo

CLASS OF 1877.

Alvah D. Blackington, C. E., Engineer in Charge of Breakwater,
Rockland
Robert B. Burns, B. C. E., Ass't Engineer N. P. R. R.,
Brainard, Minn
Eugene H. Dakin, B. S., Financial Agent, Mining Journal . Bangor
Edward F. Danforth, B. S., Lawyer ..... Skowhegan
Augustus J. Elkins, B. M. E., Draughtsman ..... Oldtown
Alicia T. Emery, B. S., Teacher ..... Orono
Samuel W. Gould, B. S., Lawyer ..... Skowhegan
Joseph C. Lunt, B. C. E., Civil Engineer, Mex. C. R. R.,
El Paso, Texas
Fred F. Phillips, B. S., Law Student ..... Bangor
Samuel Shaw, B. M. E., Architectural Draughtsman . Boston, Mass

Name and Occupation. *Residence.*

Frank P. Stone, B. S., Farmer ..... Livermore, Falls
Thomas J. Stevens, B. M. E., Apothecary .....Auburn
George E. Sturgis, B. C. E., Apothecary .....Oregon
Charles E. Towne, B. C. E., Government Surveyor, Helena, Montana
James W. Weeks, B. M. E., Draughtsman ....Cedar Rapids, Iowa
Nellie E. Weeks, B. S., (Mrs. Llewellyn Spencer) .....Orono
Ivan E. Webster, B. S., Lumberman .....Orono

CLASS OF 1878.

Emma Brown, B. S., Teacher ..... Orono
Andrew J. Caldwell, B. M. E., Draughtsman .....Brooklyn, N. Y
Cecil C. Chamberlain, B. S., Clerk in Lumber Business, Anoka, Minn
George E. Fernald, B. C. E., Merchant .....Waterloo, Iowa
James Heald, B. S., M. & St. P. R. R ... ... Minneapolis, Minn
John Locke, B. S..... Maine Central R. R., Portland
Frank J. Oakes, B. C. E., Draughtsman .....Brooklyn, N. Y
John C. Patterson, B. C. E., Civil Engineer, St. Paul & Manitoba R. R., St. Paul, Minn
Winfield E. Tripp, B. C. E., Law Student .....Albany, New York
Edward C. Walker, B. S., Lawyer .....Lovel
Otis C. Webster, B. S., Druggist ....Augusta

CLASS OF 1879.

Harry P. Bean, B. C. E., Civil Engineer C. M. & St. Paul R. R., Tama City, Iowa
Edward J. Blake, B. C. E., Ass't Engineer, W. St. L. & P. R. R., Peoria, Ill
Simon P. Crosby, B. S., Lawyer..... .... Dexter
John D. Cutter, B. S., Physician, 336 West Washington St., Chicago, Ill
Wilbur F. Decker, B. M. E., Inst'r in Vise Work and Forge Work, State University, Minneapolis, Minn
David A. Decrow, B. C. E., Draughtsman, Holly Manf'g Company, Lockport, New York
Willis E. Ferguson, B. S., Farm Manager, State Reform School, Cape Elizabeth
Charles W. Gibbs, B. C. E., Resident Engineer...Galveston, Texas
Annie M. Gould, B. S., Teacher.....Stillwater

Name and Occupation. *Residence.*

Nellie M. Holt, B. S., Teacher ..... Orono
Frank E. Kidder, B. C. E., Architect, and Instructor Institute of Technology, Boston, Mass
Mark D. Libby, B. C. E., Civil Engineer, Laramie City, Wyoming Ter
Charles S. Loring, B. M. E., Machinist, C. & S. Water Motor Co., Auburn
George P. Merrill, B. S., Ass't Nat. Museum....Washington, D. C
Arthur L. Moore, B. S., Farmer.. .....Limerick
Charles A. Morse, B. C. E., Asst. Div. Engineer, Mex. C. R. R., El Paso, Texas
Fred D. Potter, B. M. E., Draughtsman .....Providence, R. I
Alton J. Shaw, B. M. E., Engineer to C. & S. Water Motor Co., Auburn
Percia A. Vinal, B. S., Teacher.....Orono
George O. Warren, B. S., Farmer.....Fryeburg
Herbert Webster, B. S., Express Messenger .....Calais

CLASS OF 1880.

Horace W. Atwood, B. S., Student in Veterinary Science, New York City
James M. Bartlett, B. S.....Litchfield
Albert H. Brown, B. S ..... Oldtown
Marcia Davis, B. S., Teacher .....Stillwater
Fred B. Elliott, B. S., Farmer .....Bowdoin
Sarah P. Farrington, B. S., Teacher, State Reform School, Cape Elizabeth
Charles W. Fernald, B. S., Teacher ..... .Kittery
Fred W. Fickett, B. S., U. S. Signal Service....Washington, D. C
George W. Lufkin, B. C. E., Civil Engineer, N. P. R. R. St. Paul, Minn
Frank A. Mansfield, B. S., Theological Student .....Bangor
Annie A. Matthews, B. S., Teacher ..... Stillwater
Henry W. Murray, B. C. E., Teacher ....Milton, California
Franklin R. Patten, B. C. E., Ass't Engineer to Col. Waring, Newport, R. I
Charles T. Pease, B. S., Civil Engineer, Tex. & Mex. R. R., Galveston, Texas
James F. Purington, B. S., Farmer..... Bowdoin

CLASS OF 1881.

Name and Occupation.	*Residence.*
Henry H. Andrews, B. M. E	Norway
Henry W. Brown, B. S	Calais
Clara L. Buck, B. S., Teacher	Stillwater
Fannie E. Coburn, B. S., Teacher	Orono
Edward H. Farrington, B. S	Brewer
Oliver C. Farrington, B. S	Cape Elizabeth
Charles H. Fogg, B. C. E., Civil Engineer, Penn. R. R.	
Aldana T. Ingalls, B. C. E., Resident Engineer, Mex. C. R. R.,	Tampico, Mexico
Clara A. Libby, B. S	Augusta
Horace F. McIntyre, B. M. E	Waldoborough
Charles L. Moor, B. C. E	Hartland
Benjamin F. Murray, B. C. E	Stillwater
Edwin W. Osborn, B. C. E., Draughtsman	Boston, Mass
Oscar L. Pease, B. S., Teacher	Stillwater
Harold M. Plaisted, B. M. E., Private Sec'y to Governor Plaisted,	Augusta
Alice I. Ring, B. S	Orono
May L. Ring, B. S	Orono
*Roscoe L. Smith, B. S., Farmer	Lewiston
Frank S. Wade, B. S., Medical Student	Chicago, Ill
Walter A. White, B. C. E	Canton
John B. Wilson, B. S	Orono
Levi A. Wyman, B. C. E., Farmer	Ellsworth

*Deceased.

OFFICERS OF THE ASSOCIATE ALUMNI.

PRESIDENT.

EDWARD M. BLANDING, Bangor.

SECRETARY.

PROF. W. BALENTINE, Orono.

TREASURER.

PHILIP W. HUBBARD, Farmington.

CLASS SECRETARIES.

1872. E. J. HASKELL, Saccarappa.
1873. J. M. OAK, Bangor.
1874. W. BALENTINE, Orono.
1875. W. H. JORDAN, State College, Penn.
1876. N. P. HASKELL, New Gloucester.
1877. S. W. GOULD, Skowhegan.
1878. C. E. WALKER, Lovell.
1879. F. E. KIDDER, Inst. Tech., Mass.
1880. A. H. BROWN, Oldtown.
1881. A. T. INGALLS, Tampico, Mexico.

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UNIVERSITY OF ILLINOIS

CALENDAR.

1882—Feb. 7. Tuesday, Second Term commences.

June 22, 23. Thursday and Friday, Examinations.

" 24. Saturday, Prize Declamation by Sophomores.

" 25. Sunday, Baccalaureate Address.

" 26. Monday, Prize Essays by Juniors.

" 28. Wednesday, Commencement.

" 29. Thursday, Examination of Candidates for Admission.

Vacation of five weeks.

Aug. 8. Tuesday, Examination of Candidates for Admission.

First Term commences.

Nov. 27, 28. Monday and Tuesday, Examinations.

Vacation of ten weeks.

1883—Feb. 6. Tuesday, Second Term commences.

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